See attached form foradditional information. Interagency Report Control No.:

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE 1. CERTIFICATE NUMBER: 95-R-0002 CUSTOMER NUMBER: 19

FORM APPROVED OMB NO. 0579-0036 240 WS

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

University of Hawaii at Manoa Office of the Chancellor Hawaii Hall, 2500 Campus Road Honolulu, HI 96822

Telephone: (808) 956-6635

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if no

FACILITY LOCATIONS (Sites) - See Atached Listing

A. Animals Covered By The Animal Welfare Regulations	B. Number of animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not ye used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use or pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals an for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	Research, surgery or tests were conducted involving accompanying pain or distress to the animals and for whith the use of appropriate anesthetic, analgesic, or tranquiliz drugs would have adversely affected the procedures, resor interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasc such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (COLUMNS
4. Dogs	0	1	0	0	1
5. Cats	0	1	0	0	1
6. Guinea Pigs	0	0 .	0	0	0
7. Hamsters	49	431	11	0	446 44
		28	0	4	32
8. Rabbits	4	0	0	0	0
9. Non-human Primates	22		0	0	0
10. Sheep	0 (0		0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	0	0	0		
13. Other Animals					
		5	0	0	5
Dolphins	0		0	0	11
alse Killer Wh	nale 0	1		0	2
Monk Seals	0	2	0		

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approximately appro Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary in brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional Official)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

DATE SIGNED

APHIS FORM 7023

(Replaces VS FORM 18-23 (OCT 88), which is obsolete.)

(AUG 91)

OCT 1 8 2004

Column E Explanation (#1)

1. Registration Number:

95-R-0002 (Customer #19)

- 2. Number of animals used in the study. 4
- 3. Species (common name) of animals used in the study: Rabbits
- 4. Explain the procedures producing pain and/or distress.

Four (4) New Zealand White rabbits were used by one University of Hawaii (UH) Principal Investigator (PI) in the continuation of a study entitled "Immune Pathways as Prerequisite for Adjuvants' Efficacies". The overall goal of this study is to assess immunological requirements for adjuvant's efficacies. The PI largely uses mice that are genetically deficient in a number of selected immune mediators and evaluate the immunopotentiating activities of several non-toxic adjuvants in inducing antibody and cell mediated immune responses to a candidate malaria vaccine. The PI extended the evaluation of the efficacies of the adjuvants to rabbits. The PI justifies that a better understanding of the mode of action of adjuvants will allow rational design of the next generation of adjuvants with increased potency and further reduced toxicity

The four rabbits assigned to the E pain and/or distress category were those animals that received Complete Freund's Adjuvant (CFA) which is considered to cause some discomfort at the injection sites. The PI affirms that currently CFA is the only adjuvant they have tested so far in combination with a malaria vaccine that can induce parasite inhibitory antibodies. Since they are comparing the efficacy of different forms of the malaria vaccine in rabbits, they need to use an adjuvant that can reliably induce parasite (malaria) inhibitory antibodies. As such, to compare the efficacy of different vaccines, the PI's research group required the use of CFA.

The rabbits that were treated with CFA did not appear to be in any distress during the study.

 Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress would interfere with test results. (For Federally mandated testing, see Item 6 below).

If the rabbits that were treated with CFA were observed to exhibit behavior that was associated with pain and/or distress, the animals would have been removed from the study by the PI. The University attending veterinarian would have then administered pain-relieving drugs and medications.

The PI explained that adjuvants are once thought of as non-specific potentiators of immune responses. The PI asserts there is mounting evidence that adjuvants can have effects on the quality of immune responses; namely, they can affect the specificity of immune responses. The PI's laboratory found that using CFA together with a malaria vaccine enables animals to develop specific anti-malaria antibodies that kill the malaria parasites. While other non-toxic adjuvants can induce antibodies to the malaria parasites, these antibodies have been do not kill the parasites. CFA is able to induce a special type of antibody that most other adjuvants cannot. One of the research objectives is to replace CFA with other non-toxic adjuvants during immunization with malaria vaccines. Because the PI does not know what kind of antibody will kill the malaria parasites, they need to use CFA as a positive control adjuvant for the malaria vaccines. Therefore, if animals that receive CFA/malaria vaccines do not develop parasite killing antibodies, the PI suspects that the vaccine itself has not been optimized. If other adjuvants in combination with malaria vaccines do not induce parasite killing antibodies, but, the CFA/malaria vaccine does, then the PI can conclude that the non-toxic adjuvants that are being tested are not efficacious. If this is the case, then the research will move on to test other non-toxic adjuvants.

6. What, if any, fedeal regulations require this procedure? Cite the agency, the code of federal regulations (CFR) title number and the specific section number (e.g., APHIS, CFR 113.102):*Not Applicable (N/A)*

Agency:

(N/A)

CFR:

(N/A)

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. CERTIFICATE NUMBER: 95-R-0003 CUSTOMER NUMBER: 18

FORM APPROVED OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

Queen'S Medical Center 1301 Punchbowl Street Honolulu, HI 96813

Telephone: (808) -538-9011



3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary)

FACILITY LOCATIONS (Sites) - See Atached Listing

being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not ye used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use or pain-relieving drugs.	Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals an for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for whithe use of appropriate anesthetic, analgesic, or tranquilizings would have adversely affected the procedures, resor interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reast such drugs were not used must be attached to this report.)	F. TOTAL NUM OF ANIMA (COLUM C + D +
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				0
	:			0
				0
				0
		83	ç	83
	being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not ye used for such	being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but nut ye used for such purposes. animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use or pain-relieving	being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but nut ye used for such purposes. Definition of the provided conditioned or held for use in teaching, testing, experiments, or tests were conducted involving no pain, distress, or use or pain-relieving drugs. Definition of the provided conditions are the purposes. Definition of the provided conditions are the purposes. Definition of the provided conditions are the purposes. Definition of the provided conditions are the purpose of the purpo	conditioned, or heid for use in leaching, research, research, or surgery but nul ye used for such purposes. Which teaching, research, surgery, or lests were conducted involving no pain, distress, or use or pain-relieving drugs. Iteraching, research, surgery, or lests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquitizing drugs were used. Iteraching, research, surgery, or lests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquitizing drugs were used. Iteraching, research, surgery, or lests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquitizing drugs were used. Iteraching, research, surgery, or lests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquitize or interpretation of the teaching, research, surgery, or lests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquitize or tranquitize or anesthetic, analgesic, or tranquitize or anesthetic, analgesic, or tranquitize or anesthetic analgesic, or tranquitize

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actual res teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and at Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary i brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional Official)

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL. / Type or Print)

HIS FORM 7023

(Replaces VS F

(OCT 88), which is obsolete.)

(AUG 91)

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE 1. CERTIFICATE NUMBER: 95-F-0001 CUSTOMER NUMBER: 1205

FORM APPROVED OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

Tripler Army Medical Center Dept. Of Clinical Investigation (Mchk-Ci) **Department Of Clinical Investigation** #1 Jarrett White Road, Bldg 40 Tripler Army Hospital, HI 96859



3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary)

FACILITY LOCATIONS (Sites) - See Atached Listing

	B. Number of animal being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not ye used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use or pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals an for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for whithe use of appropriate anesthetic, analgesic, or tranquilizings would have adversely affected the procedures, resor interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reask such drugs were not used must be attached to this report	TOTAL NUM OF ANIMA (COLUM C + D +
. Dogs	,				
5. Cats					
6. Guinea Pigs					
7. Hamsters			10	0	10
8. Rabbits	0	0	10		
9. Non-human Primates					
10. Sheep			20	0	39
11. Pigs	0	0	39		
12. Other Farm Animals					
13. Other Animals		0	14	0	1
Ferrets	0				

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actually acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actually acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actually acceptable standards governing the care, treatment, and use of animals, including appropriate use of anestetic, analgesic, and tranquilizing drugs, prior to, during, and following actually acceptable standards governing the care, treatment, and use of animals, including appropriate use of animals. ASSURANCE STATEMENTS teaching, testing, surgery, or experimentation were followed by this research facility.
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 - 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

(Chief Executive Officer or Legally Responsible Institutional Official)

DATE Wa